Rydell Industrial (Belting) Co

Rycon process and conveyor belts

Belt Installation and Maintenance

www.rydell.com.au

Thank you for purchasing a quality RYCON conveyor belt.
The RYCON name stands for quality and reliability for over 30 years in Australia. We hope you find this pocket guide useful for the installation of your belt.

Installation

The life of a conveyor belt depends greatly on the way its installation is carried out and the treatment it receives during operation.
In fact, it is rare that a conveyor belt "wears" out, more often it is mechanically damaged due to outside forces or incorrect tracking.

It is important that before any new belt is installed on a conveyor that you take a few minutes to inspect the following items,

- the condition of the drive roller and any lagging which may be worn or lifting.
- the alignment of head and tail rollers to ensure they are square and parallel.
- remove any build up or contamination which may have occurred over the life of the previous belt.
- check any support rollers which may be siezed and ensure they rotate freely.
- a general inspection of the deck is also a good idea to ensure no sharp points exist which may damage your new investment.
- check the overall condition of the frame and its components because any misalignment will be exaggerated by the installation of a new belt due to its rigidity and run in period.

Tracking

Many factors can influence the way a conveyor belt tracks.
The installation of a new belt should be done with care and patience to ensure optimum life from your RYCON conveyor belt.

A new belt will require a running in period where the initial tension will need to be monitored. All conveyor belts stretch and as this occurs we recommend the tension be checked to allow the alignment forces to be maintained.

We recommend that enough tension be applied to ensure no slippage occurs when the belt is fully laden if necessary retension the belt until positive drive is maintained.

Generally a belt tension of between 0.4 - 1.2% is adequate

Crowned rollers are the most common method of tracking conveyor belts and a detailed specification is available from your RYDELL representative, if required.

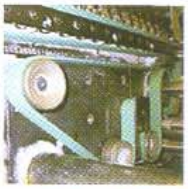
Summary

Experience tells us that many of the problems encountered with conveyor belting are a result of the conveyor and its make up.

We trust this pocket guide has been of assistance, however should you require any additional assistance, please contact your nearest RYDELL office.

Conveyor Belting

Transmission Belting



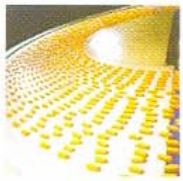
Modular Belting

Fabricated Belting

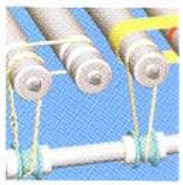
Belt Splicing Tools

Pulley Lagging

Curve Belting

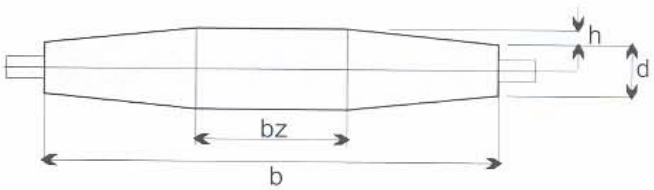


Round Drive Belts



Crowning Specifications

We suggest the following crowning be applied to conveyor drive drums to assist belt tracking



Step 1: Calculate crowning height (h)

Drum dia (mm)	<200	200-500	>500
Height h (mm)	1.0	1.5	2.0

Step 2: Calculate the cylindrical section (bz)

Width of drum b (mm)	<200	<1000	>1000
Cylindrical part bz	ISOR100	1/3 b	½ b

(ISO radius crown- refer Rydell Transmission brochure)

For every application there is a logical solution

Troubleshooting
Conveyor belt problems and cures.

Belt Stretches excessively

1. Tension on the belt is too high	1. Reduce tension to where the belt will run without slippage, increase arc of contact or lag roller
2. Conveyor under-belted	2. Replace with a stronger construction belt
3. Material build up on rollers	3. Clean all pulleys and rollers of contamination
4. Frozen rollers	4. Remove icing on the rollers to increase friction, consider lagging and grooving the drive roller face.

Belt slips and squeals

1. Belt too loose, insufficient take up	1. Increase arc of contact on drive roller, lag drive pulley, increase tension slightly
2. Conveyor under-belted	2. Replace with a heavier rated belt

Belt creeps to one side

1. Improper off centre belt loading	1. Load in direction of belt run, at belt speed on centre of belt
2. Frozen or jammed rollers	2. Lubricate rollers, improve maintenance, square rollers if necessary
3.Frame or structure crooked or not level.	3. Check alignment by stretching a string along frame edge, make correction, level frame
4. Material build up on pulleys / rollers	4. Clean and improve maintenance by mounting scrapers or other devices
5. Pulleys / rollers out of line	5. Recheck and square with a T-square against conveyor edge

Belt creeps to one side on head pulley

1. Head pulley or rollers out of line	1. Realign the pulley / rollers perpendicular to the belt centre line, or move (in direction of belt run) that pulley / roller end to which the belt has shifted

Belt wanders irregularly

1. Conveyor is over belted as belt is too stiff to properly run over pulley dia.	1. Replace with proper belt or use larger pulley diameter
2. Improper off centre loading	2. Correct loading procedure or use a belt with a V-guide

Belt fasteners pulling out

1. Incorrect size fastener used	1. Re-lace with proper size fasteners
2. Excessive tension on belt	2. Reduce tension to the point where the belt will run without slip, increase arc of contact or lag roller
3. Pulleys too small for belt thickness	3. Use larger pulley diameter or a thinner belt if practical
4. Belt tension too high caused by slippage	4. Increase arc of contact on drive roller to reduce belt tension and the effect of stiffness of the fastener joint or install an endless spliced belt

Belt splice failure

1. Pulleys too small	1. Increase the pulley diameter

Belt ply separation

1. Edge of belt worn or broken due to excessive rubbing	1. Check alignment of frame, pulleys and rollers (also see tracking)
2. Pulley dia. too small for belt	2. Increase pulley diameter, reduce tension
3. Damage by abrasives, acid, heat chemicals or oil	3. Select a belt resistant to these items
4. Excessive pulley crowning	4. Check crowning recommendations

Excessive bottom side wear

1. Belt slipping on drive pulley	1. Lag drive pulley, install snub roller for better wrap around pulley, increase tension slightly
2. Material build up on belt	2. Remove accumulation and install scraper to keep the underside clean
3. Frozen or dirty rollers	3. Lubricate rollers, improve maintenance

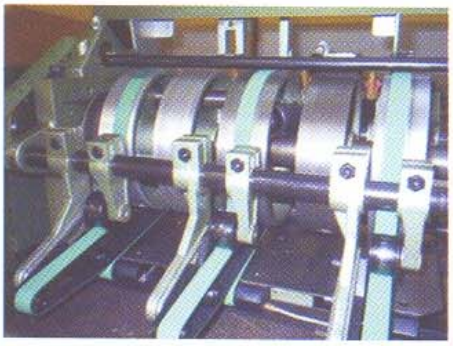
Excessive edge wear

1. Belt edges are folding up on conveyor guards	1. Use stiffer belt if practical, provide more lateral clearance, smooth rough areas on frame
2. Side loading causes belt to shift to opposite side and rub excessively	2. Improve by loading in direction of belt run, use a belt with a V-guide
3. Material build up on pulleys	3. Install scrapers to prevent build up, apply a belt with a V-guide

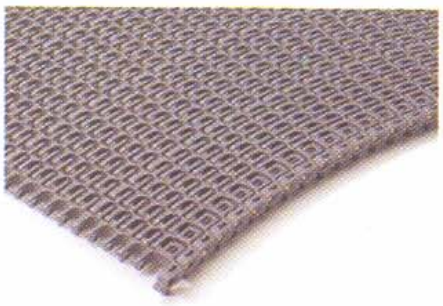
Belt cover softening and cracking

1. Damage by abrasives, acids, heat, chemicals or oil	1. Use belt resistant to these items
2. Pulley dia too small for belt thickness	2. Increase pulley diameter or use more flexible belt
3. Excessive belt tension	3. Reduce tension, lag drive pulley or provide self compensating take-up

NEED A BELT ? ANY BELT....ASK RYDELL



RAPPLON HIGH PERFORMANCE TRANSMISSION BELTING

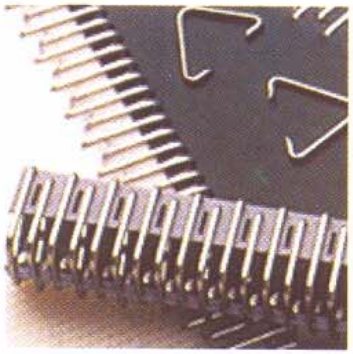


PLASTIC MODULAR BELTING

Gates®

GATES VEE & TIMING BELTS

POLYURETHANE TIMING BELTS



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